

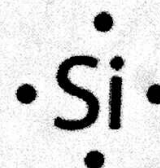
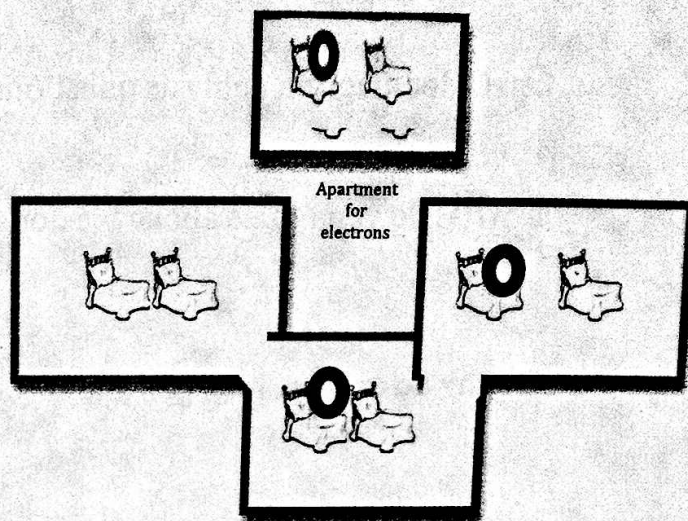
Electron (Lewis) Dot Diagrams

Name _____
Period _____ Date _____

Electron dot diagrams are a useful way to show the arrangement of outer electrons of an atom. They show valence electrons as dots at 12 o'clock, 3 o'clock, 6 o'clock and 9 o'clock, and the rest of the atom, the nucleus, as the element symbol.

It is useful to think of the outer shell as it contained two apartments, one with one bedroom and the other with three bedrooms. Each bedroom has space for two occupants. Think of electrons as frugal little fellows who do not like to share. Electrons will prefer to move into the cheaper, one bedroom apartment if it is available, so one electron will always fill the one bedroom apartment first. If the cheap apartment is not available, they'll settle for the three-bedroom apartment. No electron will share a bedroom unless the apartment becomes too crowded to have a choice. As a result, each apartment bedroom is filled with one electron before any of the bedrooms are filled with two electrons.

Silicon, for example, has four valence electrons. As a result, it will have one electron in each bedroom of the two respective apartments.



Draw the Lewis dot structure for the following elements

H							He
Li	Be	B	C	N	O	F	Ne
Na	Mg	Al	Si	P	S	Cl	Ar
K	Ca						

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Lewis dot diagram analysis questions!

1. What do you notice about the dot structures of elements in a family?
2. Why do oxygen, nitrogen and carbon bond with atoms of other elements?
3. What are the two main types of chemical bonding and how do they differ from one another? **(do a little research)**
4. Could you connect more than two hydrogen atoms together? Why or why not? Explain in terms of the structure of the atoms and their shared parts.

Draw Lewis dot Diagrams for:

5. MgCl_2

6. NaF